Michiganite

Official Publication Michigan Section

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Michiganite

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OFFICIAL PUBLICATION OF THE MICHIGAN SECTION OF THE INSTITUTE OF TRANSPORTATION ENGINEERS

President's Column

By Victoria J. Holland, P.E.

To begin my first column, I would like to express a belated thanks to the voting membership for your expression of confidence several years ago which now allows me the opportunity to serve as the 1997 Section President. So far the Section is having a very productive year.

Several years ago when I was a new participant in the Michigan Section, I would see the Executive Board gathered for their meetings and often wondered what it took to organize and make function a group like this. I guess it was then that I set my goal to become involved and hopefully gain the confidence of my peers to be elected to the Office of Director. Well, that happened in 1992 and now in 1997, I am fully realizing that it is not only my own commitment but that of many others which makes this Section function as successfully as it does. I am very pleased that over the past few years I have witnessed a turn around in our Membership's attitude toward the Section activities. I enjoy having associates coming forward and asking to be involved. After a two-year lapse, we had an "election" for the Director's position. I thank both Chuck Dulic and Kevin McCarthy for throwing their hats into the ring, knowing that one of them would be elected and begin a several year commitment to this Section. Also, members are coming forward and becoming involved with technical meetings, The Michiganite and the golf outing. You all deserve a round of applause. Are there other members who feel like I did several years ago? Please make your interest in our Section activities known to any Board Member. We will be glad to offer suggestions so that you will feel comfortable with your level of involvement.

My Michigan Section Goals for 1997 are as follows:

1. Produce a technical project for the Section.

2. Continue to increase the Educational Fund balance through Membership support.

3. Add a Michigan Section ITE Family Day event to the year's activities.

4. Host an informative and well-attended District 3 Meeting in September.

The Michigan Section's 1997 Technical Project will be to rewrite the Residential Speed Limits booklet. Lori Swanson of HRC has volunteered to chair the committee and also is the one who suggested the topic. The Board and Lori would appreciate your ideas regarding possible topics for this year and future years and your volunteer time working on this or a future project. Also, Director Mark Bott noticed that the ITE website has several Section home pages. Although this might not be a Transportation related technical project, do we have any members that might be able to get the Michigan Section on "the web"?

The Educational Fund from our Section continues to grow steadily. As of January 8, 1997, we had a fund balance of $21,642 on deposit with International. By depositing these funds with International, this portion of our fund can take advantage of two things: the more handsome interest rates of mutual fund investments and tax exempt status. Our members voluntarily contribute more than $1000 annually. The annual golf outing (of which I am personally proud) happened on May 15, 1997. We had more event sponsors this year and hopefully the outing generated about $8,000 profit. This year, we could possibly be awarding $6,000 in annual scholarships as we now have active student chapters at MSU, WSU and MTU. We will also support other student activities at all three Universities. I hope that at the end of 1997, I can rave about the continued success of the Educational Fund.

I have been asked to have the Michigan Section again sponsor some type of family event. The last Family Weekend was held in 1989 and was a poorly attended event. The Executive Board has agreed to try a Family Night Baseball Event at Lansing's Lugnut Stadium. I enlisted the help of Dave Berridge and his staff from the City of Lansing to coordinate the June 7th ITE family outing for the game between the Lansing Lugnuts and their cross-state rivals, the Grand Rapids Whitecaps. Depending upon the publishing date of this article, this even may have been recorded as a successful one! This year's event participation will be used as a deciding factor for future outings.

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MICHIGAN SECTION
Institute of Transportation Engineers

1997 EXECUTIVE BOARD

1997 COMMITTEE CHAIRPERSONS

Please send any phone, fax or address changes to:

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Ph: (248) 540-0148
Fax: (248) 433-0835

As Speed Limits Increase, the Death Rate Decreases

by Bob DeCorte

I read with much amusement and amazement, the front page article by Stan Lingeman in a recent *Michiganite.* He pointed to the few times in the history of Michigan's traffic crashes (back to 1937 - before my time!) when fatalities increased and implied that these increases were directly attributable to increases in the state speed limits. It is all backwards! As speed limits have increased the fatality rate has decreased, dramatically too!

His first point is that the 2175 deaths in 1937, when "there was no established speed limit," was 70 % higher than the 1278 deaths in 1993. There was no mention that the vmt increased from 13 billion miles in 1937 to 87 billion miles in 1993, a 670% increase. The death rate decreased from 15.9 in 1937 to 1.8 in 1993, an 89% decrease. Traffic crash deaths decreased between 1955 (2016 deaths) and 1958 (1382) due to the increase of the speed limit from the wartime 35 mph to the 55/65 mph night/day speed limit. During the same time period the death rate decreased from 7.1 to 4.2.

In 1969, when the speed limit was raised to 70 mph on limited access freeways, the death rate decreased to 4.9, second lowest in history. The energy-saving 55 mph limit was enacted in 1974 and the death rate decreased to its lowest point in history so far, 3.4. The resumption of higher speed limits, 65 mph in 1988, resulted in a 24% decrease in the death rate to 2.2 between 1983 and 1988.

Finally, the article states that the Michigan State Police recently estimated an increase of 250 deaths would be caused by raising the speed limit to 70 MPH. However, in a recent test of 70 mph speeds on 500 miles of freeways, deaths decreased more than 66% during the test period.

Since 1937, crash deaths have decreased 40%, vmt has increased 670% and the death rate has decreased 89%. During the same period, the speed limit doubled from 35 to 70 mph. Therefore, it's obvious that the crash rate decreases as the speed limit increases. If we extrapolate these statistics into the future, the State should reach a zero fatality rate in a few years. After all, our goal is zero fatalities, and by increasing the speed limit, we are on the right track. Can 90 mph and a zero fatality rate be far away?

Joints are cut closer in UTW than conventional concrete pavements. Joint sealing is not required. The surface has high light reflectivity, good appearance, and long life characteristics. The intersection market is thought to be a big application of this material. Memphis applied the material at 30 intersections last year alone.

The procedure was originally intended for parking lots and low volume roads but it was found that the material handles stress well. It is suitable for applications where a ten-year performance period would be desired. It is easy to install, requiring only the simplest methods.

A demonstration project was initiated last September in Traverse City. They plan two more demonstration projects this year for Michigan. One project will be an intersection application in Ingham County. The other project will be a church parking lot in Rochester Hills. Call Tony at 1-800-678-9622 for more information on the demonstration projects or other potential applications of UTW.

Bard Lower of MDOT Maintenance was the next presenter. His topic was "Maintaining Highways through Private Contractors." The idea of Privatization deals with hiring someone else to do the job you are responsible for. A job can be fully privatized or just partially.

MDOT has traditionally had a large maintenance force. MDOT has used the "hire someone" approach as reflected by having 3/4 of the route maintenance conducted by county road commissions. MDOT has also had some areas where they privatized part of the work. One example of this is rest area maintenance and mowing where they contract most of the rest areas and half the mowing out. MDOT has also used privatization in areas such as tree trimming, spraying, and catch basin clean out. They are now experimenting with the privatization of winter maintenance. An innovative letting procedure allows more innovation by the contractor as the procedure on how to conduct the work is not spelled out. ABC Contractors is responsible for the total routine maintenance of 121 lane miles in the Lansing area. A similar contract is in effect in the Wayne County metro area.

Both contracts were physical successes. Gauging the financial successes is more difficult. This is due to how units are measured in relation to the actual work done. MDOT will likely continue with the use of privatization because of the downsizing of the agency.

To paraphrase Bob Welke "it is not our job to maintain the roads, it is our job to see that the roads are maintained."

The last presenter was G. Robert Adams of Public Sector Consultants. His presentation was titled "Changes in Management of Highways as the Era of Big Government Ends." Changes in technology and in the way people look at government causes changes in the way we manage. There is no longer a need for the hierarchal structure where middle management taught employees the work. This step wise structure no longer works as many mid-management employees no longer know how to do the job that lower level employees do.

The ignorance that politicians have about the infrastructure creates problems that compound themselves and have associated cost increases. Infrastructure cannot be managed like social problems. Michigan puts a reasonable amount of money into highways compared to other states however, it is the backlog of work that creates the problem. There has been a 30 to 40-year under funding of roads that has compounded to create that backlog.

Counties are not able to apply general funds to road repairs like cities can. In addition, they are not able to raise taxes on their own. Thus they are tied to the state and the attitudes that are geared toward the state.

Administrative costs are now a big issue with the legislature. Michigan is in the middle realm of administrative highway costs among the fifty states. The administrative costs run in the realm of 9%. The change in management structures and the political environment requires changes in both the public and private sectors. The command in control management style fails when the work force and middle management shrinks. There are no longer people in the work force that can run all the steps. The process of management needs to be reexamined rather than the tasks and activities involved. The processes need to be mapped out to find out if they are efficient. Two elements involved in this are "Process Reengineering" where new processes are created and "Process Improvement" where existing processes are constantly fixed and improved. The ideal method involves use of both these elements.

Process teams are effective since if one member isn't available, another can step in and take responsibility. Empowerment and decentralized decision making that are the heart of self-directed teams have a benefit in that more trust is given to the employees. This is a difficult change from the traditional command in control procedure.

MDOT is attempting these types of changes through the establishment of Transportation Service Centers. These centers allow the relationships to move out of Lansing closer to the local government. Ron states that the Transportation Commission is hindering the success of this concept by refusing to allow the necessary training to take place.

Mason...Cont.

Certification Programs -- I have participated in three very interesting and thought-provoking ITE activities in the past few years: Urban Traffic Engineering Assessment project, Traffic Operations Curriculum study, and Traffic Engineering Certification. These activities demonstrate ITE's commitment to ensuring public safety and operational efficiency through technical competency. The assessment and curriculum efforts provide a substantive foundation for subsequent progress toward a meaningful and noteworthy certification process. I will seek input from across our membership as ITE begins to formulate its implementation plans.

External Constituency Interactions -- As our profession prepares for the next US transportation legislation, ITE will have the opportunity to provide its views to the USDOT and Congress. The Legislative and Policy Committee has been instrumental in developing the necessary position statements on behalf of the ITE membership. When final adoption occurs, the Institute will need to quickly interpret the pertinent language and relevant issues. Dissemination of the respective implications will be imperative. ITE can provide the guidance, implementation advice, and the forum for associated discussion of the resulting programs, initiatives, and funding scenarios.

ITE Service: Executive Committee, Board of Direction and/or ITE Headquarters Appointments: Legislative & Policy Committee; Resolutions Committee; Standards Approval Board; Career Guidance; Student Chapters Committee; Task Force on Transportation Education; Technical Activities - Transition Steering Committee; Traffic Academy Steering/Advisory Committee; Traffic Engineering Certification Advisory Committee and Working Group; Urban Traffic Engineering Project Committee -- Education & Training Panel. Specialty Councils: Technical Council: Department 2; Transportation Education Council: Executive Committee. Technical Committees: Advisory Committee on IVHS, Subcommittee on Institutional Issues; Truck Terminal Design, 5B-24; Operational Characteristics of Trucks, 5B-28; Guidelines for Rail/Highway Crossing Closures, 5C8; Impact Analysis of Proposed Development, 6A-33; Truck Trip Generation; Joint Public/Private Funding of Transportation Improvements, 6Y-44. District/Section Related: Transportation Education Council: District 2 Director; Texas Section: Inter-organizational Committee; TexITE Newsletter Editor. Awards/Recognitions: As member of Committee 5B-28, 1992 Tech Council Award for report "Geometric Design and Operational Considerations for Trucks" and certificates for service as Tech Council Vice-Chair and Dept. 2 Chair.

Lalani...Cont.

If you have any questions, suggestions or comments, please contact Nazir Lalani at PO Box 99, Ventura, CA 93002, phone: 805-654-7881, fax: 805-641-2775 or email: 02624.1777@compuserve.com.

March Notes....*Cont from P.8*

Phase I allows the problem to be identified at an informational meeting. Phase II involves both education and enforcement. Education occurs through the distribution of a brochure or letter describing means to address speeding issues. The SMART Trailer (Speed Monitoring Awareness Radar Trailer) and letters sent to owners of vehicles recorded speeding can be used in the enforcement area. Phase III is the Engineering component where physical devices on the roadway are installed only after exhausting the alternatives provided in Phase I and II.

Kevin ended his talk with a slide show that illustrated their methodology for constructing speed humps used in Phase III. Snow removal has not been a problem with the humps however, we should note that the City doesn't plow unless the snow depth is greater than 4 inches. The City has found that speeds drop overall between humps. They found they need to position signs and mailboxes to ensure that drivers do not attempt to drive around the humps. By establishing and following guidelines for the application of the speed humps the City is lessening the potential for liability. The cost to the City is $2,200 per hump which they pay out of road monies.

Tony Adams of the Michigan Concrete Institute was our first speaker after lunch. Tony spoke about "New Developments in White-Topping of Blacktop Roads." Ultra-thin white topping (UTW) is a way to extend asphalt pavement life. UTW is durable, has fast application and turn around, resistance to rutting and wash boarding. It involves placing 2 -4 inches of synthetic fiber reinforced concrete on the existing road surface. The existing surface is prepped by milling and cleaning. The material bonds to the asphalt surface allowing the use of the existing asphalt as a substructure. Under most conditions the road may be opened to use within eight to 24 hours after application. Minimal finishing is required as curing begins immediately.

MICHIGAN SECTION ITE 1997 MEETING SCHEDULE

DATE	LOCATION	TYPE	HOST
June 7	Lansing	Lugnuts Family Night	Dave Berridge (517) 483-4243
July 10	East Lansing	Tech Session	Tom Malek (517) 353-6448
August 3-6	Boston, MA	International ITE Mtg.	
Sept. 4	Lowell	Golf Outing	Ron Dressander (616) 249-3470
Sept. 25-26	East Lansing	District 3 Mtg.	Chuck Dulic (616) 333-3330
Nov. 13	Battle Creek	Tech Session	Max Phares (616) 966-3343
Dec. 11	Farmington Hills	Annual Meeting	Kevin McCarthy (810) 473-9590

Third Intl. Symposium on Intersections without Traffic Signals

July 21-23 Portland, OR

Red Lion Hotel at Lloyd Center

by: Transportation Research Board, Federal Highway Administration, University of Idaho's Ntl. Center for Advanced Transportation Technology and University of Washington's TransNow.

Call 1-888-884-3246 for more information or see http://www.uidaho.edu/ncatt.

Michigan Section ITE Treasurer's Report
Executive Board Meeting
Lansing, MI - March 27, 1997

Section Fund Balance		$ 9,744.67
Section Regular Fund Balance	$ 8,847.73	
Education Fund Balance	(187.50)	
Incident Mgt. Fund Balance	1,084.44	
Education Fund at National Balance		$23,034.37

ACTIVITIES FEB. 11-MARCH 25, 1997

Income - Section		$ 3,535.34
Dues	$ 1,394.00	
Michiganite Advertising	600.00	
Interest	21.34	
Meetings	1,505.00	
Late Dues/Fines	15.00	
Expenses - Section		$ 1,766.54
Postage	$ 210.16	
Meetings	1,355.38	
New Programs	200.00	
Other	1.00	
Income - Education		$ 400.00
Member Contributions	400.00	
Expenses - Education	0.00	

The 1997 Technical Project

At the February 13, 1997 Michigan Section meeting held in Flint, the Executive Board appointed Lori Swanson from Hubbell, Roth & Clark Inc. as the Technical Project Chairperson. The board also chose a topic for this year's technical project. It was decided that the topic of the 1997 technical project would be updating the *Speed Control in Residential Areas* booklet. If anyone is interested in volunteering to work on the project, please contact Lori Swanson at 810-338-9241 (or Email: lswanson@hrc-engr.com).

CALL FOR ABSTRACTS

The Institute of Transportation Engineers invites you to submit an abstract of a paper that you would like to have considered for presentation at the 68th ITE Annual Meeting. It will be held in Toronto, Ontario, Canada, Aug. 9-12.

Abstracts should be up to 300 words and fill no more than one typewritten page. Abstracts must be received at the ITE Headquarters no later than Sept. 15, 1997.

ITE
Gateway to Knowledge and Advancement

Contributors

Michigan Section Members who have made voluntary contributions to the Michigan Section's Education Fund in 1997 - as of Feb. 19, 1997.

Rodney Lee Arroyo
Michelle A. Barnes
Ivan V. Bartha
Gene Beezley
Mark Bott

Susan Dickinson
Gerald H. Dresselhouse
William C. Drongowski
Brenda Gordon
William Hartwig

Robert R. Hicks
Richard L. Hodges
Dwight A. Hornbeck
Robert J. Hufnagel
Kenneth W. Johnson

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Rise L. Rasch
Thomas O. Reel
Guillaume Schins
Jonathan R. Start
William C. Taylor
Jemes J. Valenta
Christopher E. Wall

President's article continued....

The 1997 District 3 Annual Meeting is to be hosted by the Michigan Section. The East Lansing Marriott is the site selected. Members be aware! We have been challenged by the Ohio Section to host a meeting with quality presentation that is better attended than their 1996 event. Please plan to participate. Art Slabosky is already working on the technical program. Mr. Chuck Dulic of HNTB Michigan will be the General Chairperson for the meeting. Please offer to him whatever level of support you can.

The Executive Board and Committee Chairperson's names are listed within Drop us a line, fax or Email. We are here to serve your interest. Best wishes for the rest of 1997!

Editor's Notes; *by Lee Liston*

Here we are in mid-May and we are still plowing snow up North. Is it ever going to warm up? I didn't think I would still be doing this but I'm starting another year as your editor. Thank you all for your kind help and contributions.

Another year and our leadership is still kicking around the issues of funding. Everyone involved in transportation engineering is dependent on sufficient government funding to accomplish their goals. One of the most dismal aspects of this whole scrum is that no one is talking traffic safety improvements. It would appear that all this is going to turn into is a large overlay project if any funding is forthcoming. How are we going to implement an IVHS world if we can't get past providing minimal roads?

Your contributions and opinions are always welcome. The next issue deadline is July 31. See you at the tech sessions!

INTRODUCING CANDIDATES FOR ITE INTERNATIONAL VICE PRESIDENT

John M. Mason, Jr., Ph.D., P.E. (F)

I feel very fortunate to be nominated as a candidate for the International Vice President of ITE. My association with ITE over the years has provided both professional and personal growth. This new opportunity allows me to share my views on sustaining and enhancing ITE's role as the principal association for transportation professionals. Although the Institute will continually modify itself to meet ever changing demands, I believe there are several items that justify particular attention to maintain the collective strength and influence that ITE currently enjoys:

* Membership Services
* Professional Development Activities
* Certification Programs
* External Constituency Interactions

Membership Services -- Why join ITE? A test-of-success for ITE is a scenario of: When an individual member has a question, needs information, or requests guidance, the member's first thought is to call upon all of ITE resources for help. The assistance may come from ITE staff, ITE Internet connection, or another ITE member. Maintaining ITE efforts of satisfying the information needs of its diverse, international members is key to preserving a vibrant and effective professional organization.

The continued development of timely and informative high quality products is a requisite service. Products must be accurate, easy to obtain, and reasonably priced. Ongoing assessments of the membership needs and desires will keep the pipeline full of ideas. ITE's councils, board of direction, and staff can assist in prioritizing the activities that will serve the maximum number of members.

Professional Development Activities -- Professional development programs must remain a core function of ITE. Both technical and non-technical activities are essential to meet the needs of the broad based constituency of ITE. In-depth, comprehensive programs are necessary for entry level personnel; continuing education efforts are likewise beneficial for the career professional.

I fully support ITE's recommendations for federal support of ongoing transportation education and training efforts, planning and research investments, focus of strengthening highway safety initiatives, and enhancing domestic and international efforts encouraging intermodal/multi modal integration. Hopefully these critical issues will receive the necessary appropriations and ITE can focus its program activities to assist in successful implementation.

Nazir Lalani P.E.(F)

Nazir Lalani, P. E. (F) is currently the City Transportation Engineer for the City of San Buenaventura, California. Nazir received strong encouragement to become an ITE International Vice Presidential candidate from ITE members, who felt that his proven track record of serving ITE for more than 15 years, would benefit the ITE organization. Nazir feels honored to be selected as a candidate and would consider it a privilege to continue serving the ITE membership. Born in Tanzania, Nazir has a truly international background. Upon receiving his Bachelors Degree from Exeter University in England, Nazir started his career in London in 1974. In 1978, Nazir moved to the United States and joined the consulting firm of Centennial Engineering in Colorado. Nazir has also held positions with public agencies and is an instructor for UC Berkeley. This broad background has given him an excellent understanding of the challenges facing both the public and private sector. His leadership positions at different levels within ITE, and involvement with various committees, has provided Nazir with the unique qualities needed to lead ITE towards the next century.

ITE Offices Held: International Director for District 6, 1994-1996, and District 6 President in 1989. Specialty and Technical Councils: Vice Chair of the Traffic Engineering Council, 1995-1997. Vice Chair of Department 6 (Transportation Planning), 1992-1994. Technical Committee Chair: District 6, 1984-1986 and Colorado/Wyoming Section, 1982-1984. Career Guidance Committee Chair: Created new ITE Chapters at 12 Universities. Committee Participation: Traffic Impact Study and Access Management brochures; surveys of Traffic Impact Fees, Signal Change Intervals, Traffic Calming Measures and Traffic Signal Design. Technical Publications: Authored or co-authored over 50 research papers and articles. Recent ITE Awards: UTEC Individual Achievement Award, 1992; 1995 Engineer of the Year Award from 17 Engineering Societies; Edmund R. Ricker International Traffic Safety Award, 1996.

Leadership Priorities: Serving as a District officer and International Director for seven years has provided Nazir an excellent insight into what members want from ITE. If elected, these are some goals that Nazir would like to pursue:
•Focus ITE's resources on hot topics such as Traffic Calming and ISTEA re-authorization.
•Support International members activities in Canada, Australia and New Zealand as well as newly formed groups in Africa, S. America, Europe and the Persian Gulf Region.
•Encourage idea sharing through the publication of columns such as ATransportation Tips@.
•Expand use of the Internet and CD ROMs to publish information more efficiently.

March Technical Meeting Notes

by Shirley Wollner

Ken Johnson hosted the March meeting of the Michigan Section at the Midway Hotel in Lansing. At the meeting the pending retirement of three long time MDOT employees was announced; Al Dewey with 40 yrs of service, Bill Schins with 31 years of service, and Mort Fener 37 years of service. At the meeting Tim Haagsma also presented John Robbins with the ITE Life Membership. Bob Larson is also a recipient of the Life Membership.

Our first speaker was John Strieter of Strieter-Lite Corporation. Jon's presentation was titled "Deer Reflectors Save Deer and People Too!" More than 500,000 deer are killed on our roadways each year. The actual number of deer killed is estimated to be as much as double the recorded figure since many deer die away from the collision point. In 1995, 8 fatalities, 2,193 injuries, and 62,000 property damage accidents occurred in Michigan because of car-deer collisions. Michigan is 3rd in deer crashes recorded by states.

The Strieter-Lite Wild Animal Highway Warning Reflector System creates an unnatural light pattern, forming an optical warning fence. Swareflex manufactures the Strieter-Lite in Austria. The Strieter Corporation is the exclusive distributor of the System in the United States and Canada. The reflectors originated in Austria in 1971 and have been used in Europe for several years.

Calhoun County has installed the reflectors at two half mile sites. These were two of the highest crash sites in the county. For a six-month period after the installation (September to March) no crashes were recorded. Livingston County is also using the reflectors.

The reflectors need to be cleaned approximately twice a year, on a need dependent basis. The reflectors can be set up to 40 feet from the pavement edge, with the distance between reflectors not to exceed 125 feet. They have been used in Alligator Alley in Florida to protect the panther, in the Badlands for elk, and on the Canadian Northern Railway to protect against moose collisions. Interested individuals can contact John at 309-794-9800.

Dr. Snehamay Khasnabis from Wayne State University was the second presenter of the morning. Dr. Khasnabis presented on the "Engineering and Legal Aspects of Automated Highways." Automated Highway Systems (AHS) are a major component of Intelligent Highway Systems and provide automated control of high speed corridors by a complex combination of roadway communications. The goal is to efficiently manage existing transportation resources, increase capacity, and safety. AHS is attractive because no major construction is needed to increase safety and capacity. AHS works similarly to the idea of a train hauling multiple cars except that not all the cars have the same origin and destination, and more stops are involved. Spaces are needed between platoons to accommodate entrances and exits. Multiple gates are needed at the same exit or entrance to ensure flow is maintained at a consistent speed.

The disadvantage of AHS is that no precedence exists for the technology. It is a defense technology being applied to a civilian situation. It forces a transition from manual control to auto control. Elderly drivers may not be suited to the technology and there may be an issue with ADA restrictions. If an automated highway system were to fail, there is uncertainty as to who would be liable. Since no standards exist, courts will have difficulty deciding litigation issues. The key issue in litigation decisions will be on whether it is a product or service that will be provided. This is an unclear issue with AHS as the difference between products and services is not clear.

What is needed in the realm of AHS is a process to assess responsibilities in the case of negligence. In addition, procedures to exempt of limit liabilities need to be in place. The goal is to balance the interests of citizens at large versus agencies, employees, and contractors.

The last presenter for the morning was Kevin McCarthy of the City of Farmington Hills. Kevin presented the procedure that Farmington Hills has set up for "Traffic Calming on City Streets."

The way the City used to handle citizen complaints was to require the citizen to isolate the problem to a 2-hour block of time at a specific location. That time period at that location would then be studied and selective enforcement applied. This was occurring at the rate of 200 locations a year.
To develop a more efficient and effective means of handling citizen complaints the City developed the Traffic Safe Te³ Program. This is a safety awareness program that stresses Education, Enforcement, and Engineering. The program provides a systematic approach to identifying traffic problems and the phasing of different alternatives for their solution. The phasing is graduated from the simplest solution to the most restrictive, with the understanding that if a particular method does not resolve a situation, then a more restrictive approach may be necessary. Throughout this process the homeowner's association or resident group is directly involved. In this way the residents know the extent of the problem, why the problem is occurring, what measures can be anticipated to resolve the situation, and when to expect some relief.

Cont. on P. 10

ITE Michigan Section Technical Session Notes - Feb. 13

by Shirley Wollner

Our Feb. Technical Meeting was hosted by Dennis Grylicki of the Genesee County Road Commission. The meeting was well attended and a wide variety of topics were covered. The program offered something for everybody from safe transportation of non-drivers, to signing, community enhancements, bridge construction and legislative issues.

AAA Pedestrian Programs

by Dave Feber, Auto Club of Michigan

Dave made sure everyone in the audience was awake by showing us his talents as a magician. He used an unconventional approach to start his talk to highlight some unconventional approaches to convey the impact of pedestrian crashes. Dave started off by discussing the *Pedestrian Safety Action Team*. This team was mandated by the 1991 ISTEA legis-lation. The goals of the team are; to gain an understanding of pedestrian crashes, increase public awareness, promote pedestrian safety advocacy groups, and provide a model for community programs.

There is an increasing trend when looking at pedestrian fatalities in Michigan during the years 1992 to 1995. Pedestrian crashes at intersections have actually decreased - only 1/8 of the pedestrian accidents are occurring at intersections.

Pedestrians have a number of risks. The first is turning vehicles at intersections. The pedestrian is at risk stepping off the curb, dealing with turning vehicles and vehicles leaving the intersection after they turn. Another risk is the "visual screen" formed by other vehicles or objects in the roadway. Pedestrians create a risk for themselves by only relying on the pedestrian signal as an indicator of when it is safe to cross. This "signal faith" issue is a key problem with the elderly. Pedestrians are also at risk in non-intersection situations. Non-intersection accidents include backing vehicles, sidewalk accidents and parking lots.

Dave also talked about the importance of including pedestrian considerations in design of school sites. Design concepts such as the separation of pedestrians and vehicles, curbside access, and elimination of the need for backing maneuvers should all be incorporated as part of school site safety. We have seen situations where *No Parking* signs are placed on the school side of a street to improve traffic flow. However, this promotes students crossing mid-block for parent pick-up. OHSP has a new release of *Traffic Safety Planning on School Sites* that can be used to promote pedestrian safety at schools.

The FHWA has a pilot program to promote pedestrian safety awareness. The *Walk Alert Program* provides safety guidelines for communities. Five pilot communities have been selected for federal road shows to show off the program. Highland Park was one of the five communities selected and has been very successful in incorporating it. Eight to ten more communities in Michigan will have an opportunity to participate in the program this year through the OHSP. These communities will be chosen on the basis of the number of pedestrian crashes and crash rates, as well as on their level of interest.

Dave concluded his presentation with a video that highlighted some of the situations that are hazardous for pedestrians.

School Buses Present and Future; Is the Safest Travel Mode to School in Danger?,

by Sergeant Sharron VanKampen, Michigan State Police Motor Carrier Division

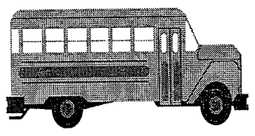
Sharron is in charge of the Bus Inspection Program. Changes are underway in the way pupil transportation is handled and Sharron's talk focused on the implications of those changes.

Children get to school in a number of ways, only one of which is the familiar yellow bus. Dial-a-Ride, transit, and parents all provide student transportation. Schools receive transportation funding as a block amount per student. In tight budget situations these dollars are often shifted into educational funds. The school bus is the safest form of transportation for our school kids but that form of transport is in trouble and fund diversion is just one indication of this. Schools have been moved out of the center of the community too far for students to walk to school. In addition, we no longer feel it is safe for children to walk to school. This makes the issue of student transportation an important one.

The School Bus Inspection Program has been changed this year. Formerly, every bus in the fleet was inspected once a year. Now 50 percent of the vehicles are selected for inspection due to monetary constraints. There seems to be some mistrust with voluntary compliance under this new system.

Many schools are now outsourcing transportation. Schools are not required by law to provide transportation. The outsourcing doesn't really save a district any money but it provides fewer worries for the school district. This type of environment doesn't provide the safe environment of the yellow bus. No records are kept of fights that occur on the bus or at bus stops. The drivers are not obligated to do anything other than drive the vehicle.

Sharron thinks that one solution to these types of issues may be Cooperative Transportation. This refers to adjacent districts in a county or other region pooling their buses, mechanics, and other transportation resources. This will save money and alleviate part of the burden. The school buses could be used in off peak hours to provide other services such as transportation for the elderly.



Traffic Signing Ideas to Save Lives and Energy

by Laurel Painter, MDOT Saginaw District

Laurel gave a slide presentation that showed a number of examples of traffic signing innovations in the field. These were examples of fine-tuning signing to meet the needs of a particular situation.

Laurel feels that advance road name signs are a good idea. Proper use of graphics is important to reflect the situation that drivers will encounter. He has a preference for placing route markers above directional signs to help drivers select their desired route. Some nonstandard signing was presented including 2 signs which are used to supplement stop signs, especially where traffic control has changed. One situation used a "Cross Street Does Not Stop" plaque to reinforce the need for drivers to check approaching traffic before entering the intersection. Another sign used to reinforce this idea was one which read "Make Sure Cross Street Traffic Stops."

Sign maintenance was another element that Laurel stressed. Detour signing, overhead signing, and fire station signing were also highlighted in Laurel's presentation.

The Livingston County Greenway Initiative

by William Wagoner, Planning Department of Livingston County

Bill is the Director of Planning and Emergency Management for Livingston County. He has written a book on Greenway Planning. His talk centered on how Livingston County is developing its Greenway vision.

Greenways provide an open space character that attracts people. They can benefit communities by providing recreational and social opportunities. They assist the local economy by adding to the value of housing stock. They help the ecology of an area and promote a community's image by reinforcing a community focus - not just a housing location.

But greenways need planning and effort for success. Greenway planning must take place at the local level.It cannot be forced but it can be encouraged. Livingston County takes this role by acting as an educator and facilitator. The County provides guidebooks and technical experts to local communities to assist them in their efforts. In this way the County helps maintain some consistency in the Greenway Initiative that ties into the Greenway Vision for SE Michigan.

There are currently 435 greenways in 42 states for a system of almost 5000 miles. There are plans to link the greenways in southeast Michigan to other greenways in the state, in the United States, and even into other countries.

Many opportunities exist for the establishment of greenways. Abandoned railroad corridors, river, utility and road corridors all provide opportunities. Wetlands are often connected to greenways. Considerations must be given to the type of use planned for the greenway, whether pedestrian, non-motorized, water recreation, or motorized vehicles. Consistency in the use of the greenway between neighboring communities is also important.

Many resources are available for development and design guidelines. Funding can be provided through state and federal grants, bond sales and donations. Livingston County also has books that provide information on greenway issues.

Construction of the Second Blue Water Bridge

Bruce Campbell, MDOT Construction

Bruce has been Assistant Project Manager on the Blue Water Bridge since 1994. The second Blue Water Bridge is an "additional capacity project."A number of factors were involved in determining the need for a second bridge; the improvement of I-69, the amount of cross border shopping, and the number of commercial vehicles desiring to cross at this location. The potential increase in those vehicles due to NAFTA also prompted the desire to have a new bridge in operation in 1997.

A project team was assembled in 1992 consisting of environmental, engineering, and construction concerns. Five bridge alternatives were evaluated extensively. Issues under consideration included compatibility of the design with the area, environmental concerns, a design that was a contemporary version of the existing bridge, minimizing potential construction delays, and having no adverse impact on the existing bridge. The design selected was a continuous tied arch. The last bridge of this style had been built in Oregon in 1971.

The bridge has a 922-foot main span with three flanking spans on either side. Additional approach spans are incorporated in the design. The bridge provides three twelve-foot lanes, 4 foot shoulders, and a 3-foot sidewalk that is rail separated from the travel lanes.

Many agencies were involved in the design and construction process. The structure has two owners, MDOT and the Blue Water Bridge Authority. Two countries with five permitting agencies were involved as well as 17 approval review agencies. The design was completed completely in metric units. Three separate contracts were awarded for construction.

The first piles were driven in Ontario in April 1995 and in Michigan in September 1995. Pier construction took place through 1995-1996. In November of 1996 the first of the closure pieces was put in and within 9 days the last of the arch rib members was placed. The complex design includes scissor jacks to control the elevation of the structure, tower jacks, and a jack that can move the entire MI span longitudinally.

The project includes a community liaison, which keeps the community updated on the project status, provides a quarterly newsletter, and assists in media coverage of the construction. Bridge tolls were raised on January 1 to help pay for the new structure. A July 14, 1997 opening is planned. The bridge is currently on schedule and is less than 1/2% over on budget! The old bridge will be closed on July 14 for rehabilitation that is expected to be complete in November 1998 although this could change due to the unexpected nature of the project.

Bruce took slides during the course of construction to illustrated the size and complexity of the project.

Cont. on next page

Today's Hot Transportation Legislative Items

by Matt Delong, Assistant to the Director, MDOT

Our final presenter gave us a review of the transportation related legislative items in 1996 and a look ahead into 1997. The current stalemate of the state/local funding split is expected to continue. The state government feels that the state should have the greater share of funding allocation due to the importance of the state routes to the local economy and that the current method of allocation is not equitable. The local governments feel the state isn't an independent entity and that there is no need to change the current formula. Some understandings may occur such as the locals agreeing to extra funding for bridge work. There has been a general retreat from the gas tax at all levels of the state government.

Michigan didn't act as fast as some states did to the federal speed limit repeal due to stronger safety concerns. The governor and the legislator came together to establish test zones which Michigan State University monitored to determine the impact of raising speed limits. The basic speed data showed that speeds remained fairly constant. As a result speeds will be raised to 70 mph on most of the non-urban interstate. The intent was to have this completed by March 1 however this is somewhat behind schedule.

The safety community used the speed issue to bring up other topics such as safety belt issues, speeds in construction and special zones, and photo cops. Fines have been doubled in construction zones and the state police have committed to enforcing this. Our legislator is not quite ready to accept the use of photo cops although other states have given their approval. Highway Tort Reform passed the Senate but not the House. Changes to the Uniform Condemnation Act passed which allows for fewer challenges to the necessity of condemnations. Diesel fuel tax has increased to 21cents a gallon but the 6 cent diesel discount still exists. The fuel tax can be paid quarterly but users can also apply for a refund of state sales tax.

Matt doesn't expect any new issues in 1997. Concern will still exist over accountability. Phil Hoffman has proposed and revised some bills that address this issue. Any type of gas tax increase looks unlikely to occur as well as any shifts in revenue sources. The Governor has proposed an additional 43 million dollars from the state economic development fund to be used for special projects. He has also called for efforts to curtail aggressive drivers although nothing has shown up on the legislative agenda yet.

At the federal level, the reauthorization of ISTEA is due in 1997. ISTEA sunsets on September 30 and the reauthorization is not expected to be resolved at that time. If this occurs, there will be no funding and that will put the squeeze on the government to reach a solution quickly. This issue is unifying Michigan transportation interests. The goal is to get more money back that we send to the feds. For every dollar sent, the State gets 78 cents back. There is also a desire to reduce the number of strings attached to federal aid - hopefully allowing more flexibility. A reduction in federal red tape by promoting a more uniform system would help deal with all issues related to a project at once.

How Engineering Specifications Live Forever

The U.S. Standard railroad gauge (distance between the rails) is 4 feet, 8.5 inches. That's an exceedingly odd number.

Why was that gauge used? Because that's the way the built them in England, and the US railroads were built by English expatriates.

Why did the English people build them like that? Because the first rail lines were built by the same people who built the pre-railroad tramways and that's the gauge they used.

Why did "they" use that gauge then? Because the people who built the transways used the same jigs and tools that they used for building wagons, which used that wheel spacing.

Okay! Why did the wagons use that odd wheel spacing? Well, if they tried to use any other spacing the wagons would break on some of the old,long distance roads, because that's the spacing of the old wheel ruts.

So who built these old rutted roads? The first long distance roads in Europe were built by Imperial Rome for the benefit of their legions. The roads have been used ever since. And the ruts? The initial ruts, which everyone else had to match for fear of destroying their wagons, were first made by Roman war chariots. Since the chariots were made for or by Imperial Rome they were all alike in the matter of wheel spacing.

This, we have the answer to the original question. The U.S. standard railroad gauge of 4 feet, 8.5 inches derives from the original specification for an Imperial Roman army war chariot.

Specs and Bureaucracies live forever.

So the next time you are handed a specification and wonder what horse's ass came up with it, you may be exactly right. Because the Imperial Roman chariots were made to be just wide enough to accommodate the back-ends of two war horses.

REMINDER

Third International Symposium on
Intersections without Traffic Signals

July 21-23
Portland Oregon